

### REMARKS

This document is submitted in response to the Office Action mailed March 28, 2006 ("Office Action").

Claims 1, 3-6, and 8-26 are pending. Claims 1, 3-6, and 8-10 are under examination. Reconsideration of these claims is requested in view of the following remarks.

#### Rejection under 35 U.S.C. § 103(a)

The Examiner rejected claims 1, 3-6, and 8-10 as being obvious over U.S. Patent No. 4,320,151 to Cole ("Cole") in view of U.S. Patent No. 2,529,131 to Boinot *et al.* ("Boinot"), U.S. Patent No. 3,982,355 to Bass ("Bass"), U.S. Patent No. 4,337,123 to De Sa *et al.* ("De Sa") and U.S. Patent No. 5,730,877 to Heikkila *et al.* ("Heikkila"). See the Office Action, page 2, lines 18-22.

Applicants respectfully traverse and discuss independent claim 1 first. This claim is drawn to a composition containing a thermolabile protein admixed with a liquor waste.

According to the Examiner, (i) Cole teaches "increasing thermal stability of amylase by adding the enzyme to a concentrated sugar solution ..." and (ii) Boinot, Bass, De Sa, and Heikkila all teach that vinasse "is a waste," "contains unfermentable sugar," and "can be fractioned to obtain fractions rich in sucrose." See the Office Action, page 3, lines 1-20. The Examiner then asserted that

It would have been obvious to use vinasse to supply the sugar in the sugar solution that amylase is added to stabilize the amylase during heating as disclosed by Cole as suggested by Boinot *et al.*[.] Bass, and if needed Heikkila *et al.*[.], disclosing that vinasse contains sugar, and can be concentrated and dried, and as further suggested by De Sa *et al.*[.] disclosing that disposing of vinasse is a problem, and finding a use for vinasse will be of benefit. Vinasse is a liquor waste and mixing vinasse with the amylase of Cole will result in a composition as presently claimed.

See the Office Action, page 3, line 6 through page 4, line 11, emphasis added.

Applicants disagree. Contrary to the Examiner's assertion, the cited references, alone or combined, do not teach or suggest "mixing vinasse with the amylase." In fact, as the Examiner

admitted, the references only teach or suggest that “vinasse can be fractioned to obtain fractions rich in sucrose” or “to supply the sugar in the sugar solution that amylase is added” (emphasis added) *supra*. In other words, the cited references merely teach or suggest that vinasse is a source for purifying sugar. This is a far cry from mixing vinasse directly with the amylase of Cole. Thus, the above cited references cannot be said to provide either a motivation or a reasonable expectation of success for mixing vinasse directly with mixing the amylase of Cole, let alone for a composition having a thermolabile protein admixed with a liquor waste as required in claim 1.

It appears to be the Examiner's position that, if one component (such as sugar) can be used for a particular purpose, any mixture (such as vinasse) containing the component can be used for that purpose too. If this is indeed his position, the rationale for it was not stated and is not at all apparent.

Cole, the primary reference cited by the Examiner, teaches “a process of making a bakery product having improved softness retention over an extended shelf life period resulting from incorporation of a fungal alpha amylase preparation resistant to temperatures incurred during baking and an edible emulsifier” (emphasis added). The process requires adding the fungal alpha amylase preparation to a dough. See the Abstract and independent claim 1.

In view of the teachings from Cole, one skilled in the art would recognize that anything harmful should be avoided in the alpha amylase preparation of Cole since it is used for making food for humans. In this connection, Applicants note that discharge of vinasse causes “heavy pollution” to the environment so that “[l]aws in the United States now prevent such discharge from being carried out.” See De Sa, column 1, lines 52-57. The other references cited by the Examiner also teach that vinasse is a waste. In view of these teachings, one skilled in the art would recognize that vinasse contains harmful components and would not be motivated to mix vinasse with the alpha amylase preparation of Cole for making a bakery product. Further, to the extent that De Sa teaches that vinasse causes “heavy pollution,” it teaches away mixing vinasse directly with ingredients for making food, such as the alpha amylase preparation taught in Cole.

Thus, it would not have been obvious to mix vinasse taught in Boinot, Bass, De Sa, and Heikkila with the alpha amylase preparation taught in Cole.

For the above reasons, Applicants submit that claim 1 is non-obvious over all cited references. So are claims 2-6 and 8-10, all of which depend from claim 1.

CONCLUSION

Based on the remarks set forth above, Applicants submit that all of the pending claims cover allowable subject matter. Allowance by the Examiner is respectfully solicited.

Enclosed is a \$60 check for a petition of a one month extension of time. Please apply any other charges to deposit account 06-1050, referencing attorney docket No. 08919-074001.

Respectfully submitted,

Date: \_\_\_\_\_

7-18-2006



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